

## Obesity & Other High School Health Risks (2011)

One in ten high school students (11%) in Rhode Island (RI) is obese.<sup>1</sup> This Brief examines if these students are in greater jeopardy from other risk behaviors than their peers who are not obese (Chart 1), and whether those risks have improved or worsened over time (Chart 2). Nineteen measures are evaluated,<sup>2</sup> comprising seven areas of vulnerability (drugs and alcohol, injury, mental health, sex, tobacco, violence, and weight). The findings are intended to inform interested parties and stimulate further research.

In this analysis, the relationship between obesity and other risk factors is one of association, not causation (e.g., obese students are more likely to not exercise, but being obese cannot be said to cause physical inactivity). In the text, only those differences in values (over time or between obese and non-obese students) that are statistically 'significant' at the 95% confidence level are noted.<sup>3</sup> Lastly, with the exception of the 'lesbian, gay or bisexual' measure, all others are unfavorable indicators, so lower/declining values are preferred.

**Drugs & Alcohol:** Obese students are no more likely than their non-obese peers to use marijuana, abuse legal drugs (prescription and 'over-the-counter'), or drink alcohol.

**Injury:** Rates for drinking and driving, and the use of seat belts and bike helmets are not significantly different for obese and non-obese students.

**Mental Health:** Emotional disability rates are not significantly different for obese and non-obese students, nor are the rates for acute depression and attempted suicide.

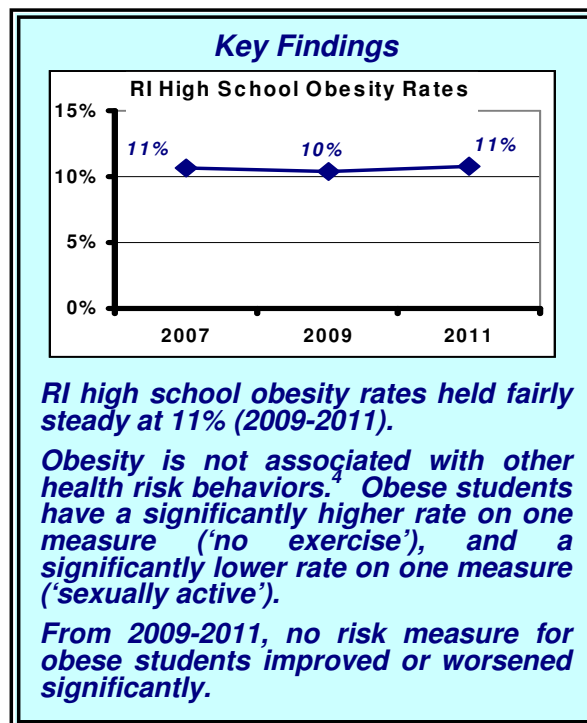
**Sex:** Obese high schoolers are more likely to identify as lesbian, gay or bisexual (12% vs. 7%), but they are less likely to be sexually active (21% vs. 31%). The rates of unprotected sex are similar for the two groups.

**Tobacco:** The rate of cigarette smoking is not significantly different for obese students, nor are the rates of heavy smoking (more than 10 cigarettes a day) or the use of any tobacco product (cigars, cigarettes, smokeless tobacco, pipes, snuff, etc.)

**Violence:** Physical fighting, dating violence and forced intercourse rates are not significantly different for obese and non-obese students.

**Weight:** Obese students are much more likely to not exercise (17% vs. 11%), but their rate for poor nutrition is not significantly different than that for non-obese students.

One in ten RI high schoolers is obese, but obesity is not correlated overall with the other risk factors examined.<sup>4</sup> Obesity does contribute to a range of chronic conditions (e.g., hypertension, diabetes, heart disease, back and joint pain, etc.), but obese students are generally no more likely than their non-obese peers to engage in behaviors that threaten their health and well-being.



<sup>1</sup> Students self-reported their height and weight, and obesity is calculated at or above the 95<sup>th</sup> percentile (by gender) for body mass index.

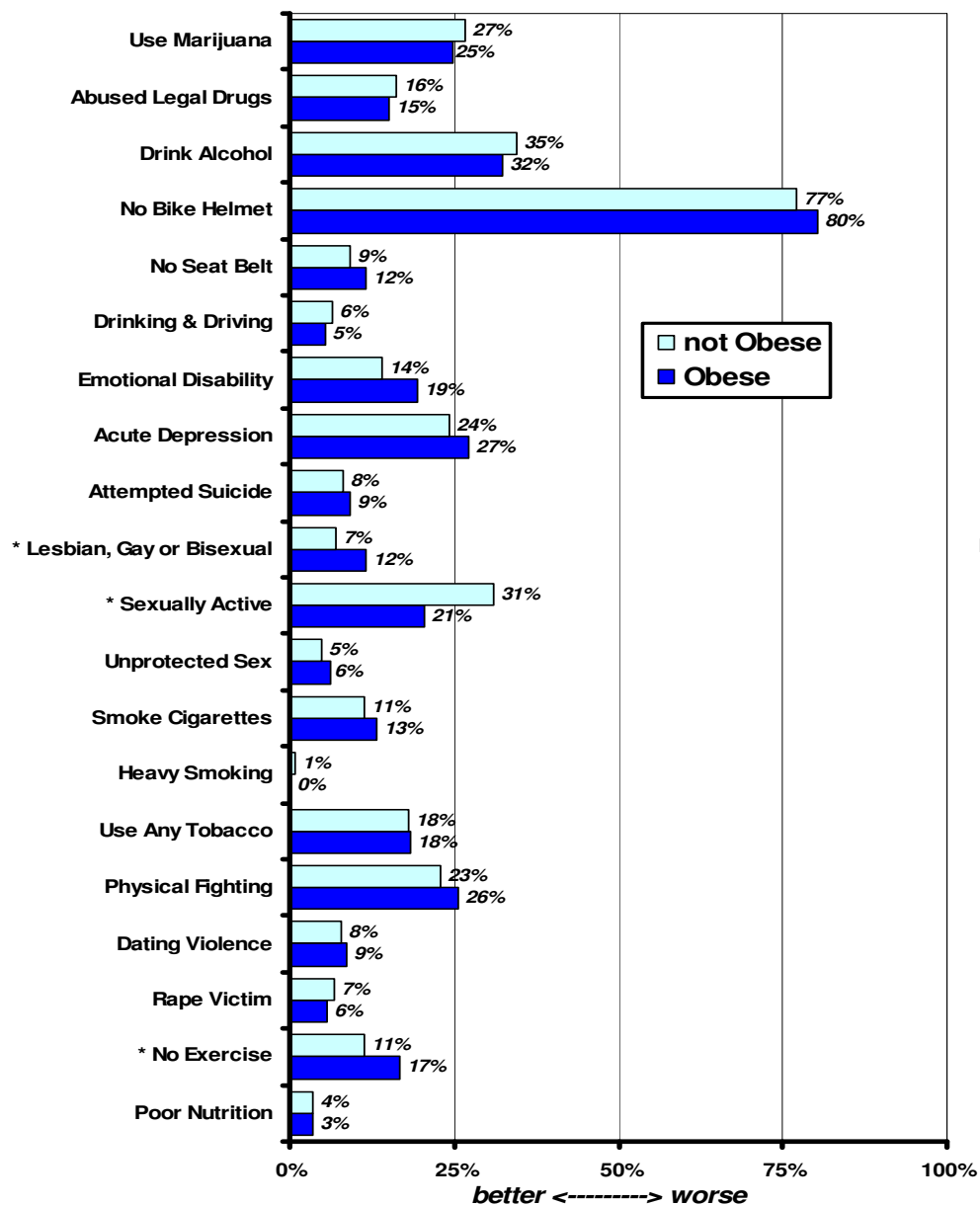
<sup>2</sup> Data are from RI's Youth Risk Behavior Survey, part of a biennial national survey of high school students on the major causes of disease and injury morbidity and mortality. For more information contact Bruce Cryan, 401-222-5111, [www.health.ri.gov/data/youthriskbehaviorsurvey](http://www.health.ri.gov/data/youthriskbehaviorsurvey).

<sup>3</sup> As the RI-YRBS is a sample survey, if the 95% Confidence Intervals of two values do not overlap, one may conclude (with 95% certainty) there was a 'real' difference between the two values (i.e., the difference was not likely due to sampling bias).

<sup>4</sup> The Phi Coefficient ( $r_\phi$ ) measuring the correlation of obesity and other higher health risks is 0.000 ('0' is no correlation & '1' is perfect correlation).

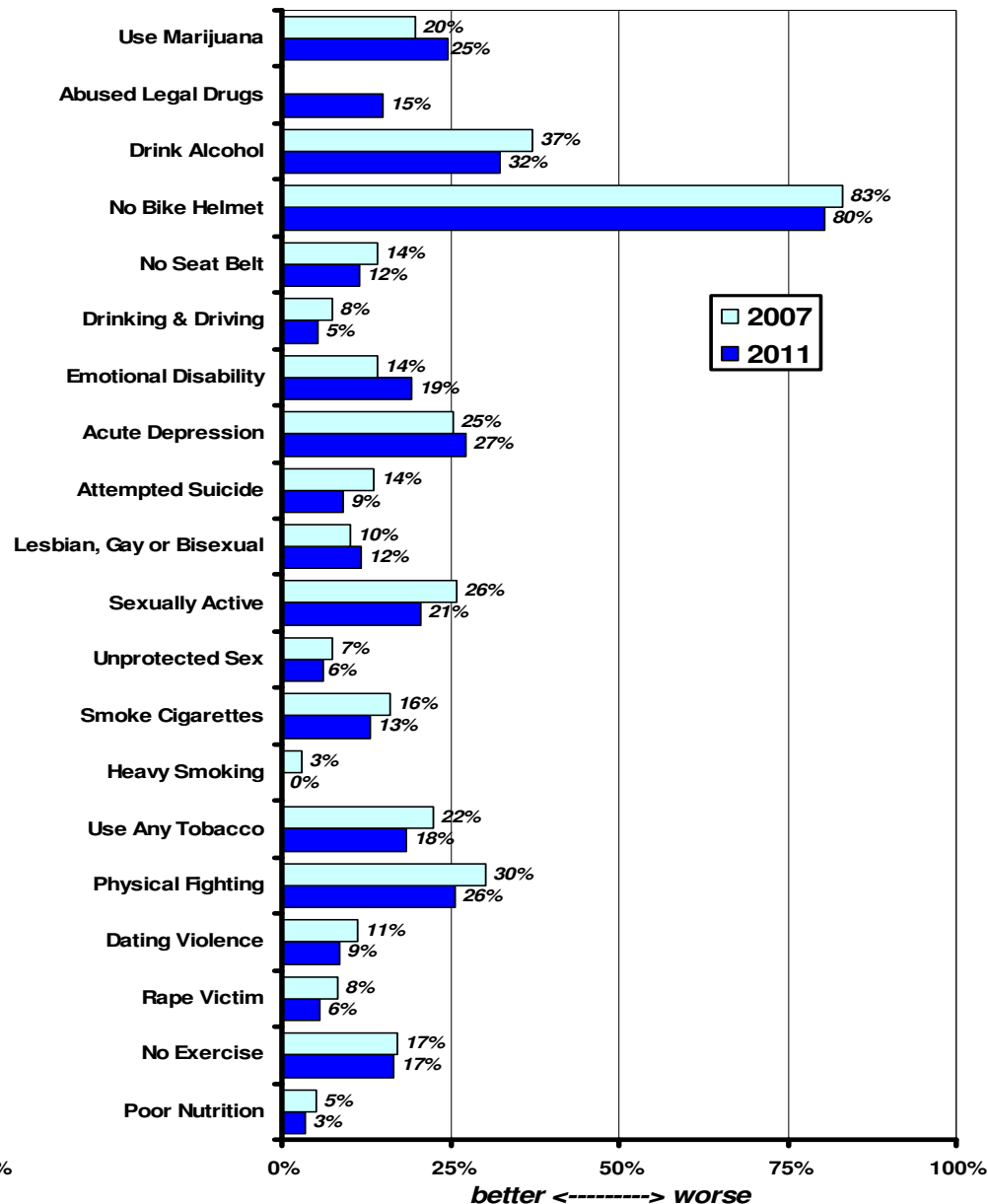
**Chart 1: RI 2011 H.S. Health Risks by Obesity Status**

(\* statistically significant differences)



**Chart 2: RI 2007 & 2011 Health Risks for Obese Students**

(\* statistically significant changes)



**DRUGS & ALCOHOL MEASURES:** *Use Marijuana* (1+ times, past mo.); *Abused Legal Drugs* (abused prescription and/or 'over-the-counter' drugs 1+ times, ever); *Drink Alcohol* (1+ days, past mo.); **INJURY MEASURES:** *No Bike Helmet* (never or rarely wore, past yr.); *No Seat Belt* (never or rarely wore, past yr.); *Drinking & Driving* (1+ times, past mo.); **MENTAL HEALTH MEASURES:** *Emotional Disability* (for 6+ mos.); *Acute Depression* (for 2+ weeks, past yr.); *Attempted Suicide* (1+ times, past yr.); **SEX MEASURES:** *Lesbian, Gay or Bisexual* (sexual self-identity); *Sexually Active* (1+ partner, past 3 mos.); *Unprotected Sex* (no protection, last encounter); **TOBACCO MEASURES:** *Smoke Cigarettes* (on 1+ days, past mo.); *Heavy Smoking* (over 10 cigarettes per day, past mo.); *Use Any Tobacco* (used chewing tobacco, snuff, dip, or smoked cigars or cigarettes on 1+ days, past mo.); **VIOLENCE MEASURES:** *Physical Fighting* (1+ times, past yr.); *Dating Violence* (physically abused by partner in the past yr.); *Rape Victim* (forced into sexual intercourse, ever); **WEIGHT MEASURES:** *No Exercise* (60+ min. of exercise on 0 days, past wk.); *Poor Nutrition* (no fruit or vegetables, past wk.)